

**From:** David J Wolking <djwolking@ucdavis.edu>  
**Sent:** Tue, 29 May 2018 12:32:00 -0700  
**To:** predict-outbreak@ucdavis.edu  
**Subject:** [predict-outbreak] Fwd: [predict] Re: PRO/AH/EDR> Nipah virus - India (07)

Just flagging the outbreaks handle on this thread between Andrew and Jon.... was discussed on MT call today as well.  
D

----- Forwarded message -----

From: **Jon Epstein** <[epstein@ecohealthalliance.org](mailto:epstein@ecohealthalliance.org)>

Date: Tue, May 29, 2018 at 6:59 AM

Subject: [predict] Re: PRO/AH/EDR> Nipah virus - India (07)

To: Andrew Clements <[AClements@usaid.gov](mailto:AClements@usaid.gov)>

Cc: Xerses [REDACTED], Umesh [REDACTED], Sara [REDACTED],  
[REDACTED] "Daniel [REDACTED], Angela [REDACTED], "Dennis [REDACTED]  
[REDACTED] Ricardo [REDACTED], Rajesh  
[REDACTED], Predict inbox <[predict@ucdavis.edu](mailto:predict@ucdavis.edu)>, Peter Daszak  
<[daszak@ecohealthalliance.org](mailto:daszak@ecohealthalliance.org)>

Thanks Andrew,  
We've been following this closely, too.

It sounds like they're doing a good job identifying suspected cases. Hospital transmission becomes a concern if doctors or family members aren't using PPE when in contact with patients.

As for the bat work, it's unlikely they'll find an infected bat at this stage. Even if they sample *P. medius* (formerly called *giganteus*), which is the probable reservoir, it's been weeks now since the initial spillover to the index case and local bats have probably stopped shedding virus. It's not clear that they have found or sampled this species yet, but it's most likely the source of infection. In Bangladesh, we found collecting lots of urine from under the roost as soon as possible once the index case is identified and local *P. medius* roosts are found, gave us the best chance of detecting virus.

A benefit of word traveling nationally about this is that the possibility of spillover is present wherever these bats are, provided there's a route of transmission available. Hopefully, officials will continue giving messages not to exterminate bats, but rather to avoid bitten fruit (though we still don't know how this outbreak started).

Cheers,  
Jon

Jonathan Epstein DVM, MPH, PhD

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[REDACTED]  
@epsteinjon

On Tue, May 29, 2018, 4:04 AM Andrew Clements <[aclements@usaid.gov](mailto:aclements@usaid.gov)> wrote:

FYI

*Andrew P. Clements, Ph.D.  
Senior Scientific Advisor  
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health  
U.S. Agency for International Development*

**REDACTED**

Email: [aclements@usaid.gov](mailto:aclements@usaid.gov)

Begin forwarded message:

**From:** **REDACTED**

**Date:** May 29, 2018 at 2:26:08 AM GMT+2

**To:** **REDACTED**

**Subject:** PRO/AH/EDR> Nipah virus - India (07)

**Reply-To:** [promedNOREPLY@promedmail.org](mailto:promedNOREPLY@promedmail.org)

NIPAH VIRUS - INDIA (07)

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A ProMED-mail post

<<http://www.promedmail.org>>

ProMED-mail is a program of the  
International Society for Infectious Diseases

<<http://www.isid.org>>

In this update:

- [1] Kerala new cases
- [2] Kerala new cases, Telangana and Karnataka NOT
- [3] Search for virus hosts, Kerala
- [4] Goa ex Kerala suspected

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[1] Kerala new cases

Date: Sun 27 May 2018

Source: Hindustan Times [edited]

<<https://www.hindustantimes.com/india-news/nipah-virus-outbreak-death-toll-rises-to-14-in-kerala-two-more-cases-identified/story-f4QenFXeOtJnWhw7NrVawJ.html>>

The Nipah virus claimed one more life in Kerala on Sunday [27 May 2018], taking the death toll to 14 even as health authorities reiterated that the situation was under control and no fresh case was reported from affected areas.

The latest victim was identified as a 26-year-old man, who was admitted at a private hospital in Kozhikode with infection.

In the Kozhikode Medical College Hospital, 2 more Nipah-infected people are undergoing treatment at the intensive care unit, state health officials said.

Among 14 deaths, 11 are from Kozhikode and 3 from Malappuram. Most of the people who were under observation were discharged after their blood samples turned negative. Now 26 people are under observation, they said.

Nipah virus causes high fever, headache and coma in extreme cases and is spread by fruit bats. Body fluids can cause human-to-human transmission of Nipah, which has a mortality rate of 70 percent and has no vaccine.

Blood and serum samples of bats collected from the affected areas turned negative, and health experts are trying hard to pinpoint the main carriers of the virus.

The district administration in Kozhikode on Sunday [27 May 2018] started a "pad yatra" to dispel fear of the people. [Pad yatra is a journey undertaken by a politicians or prominent citizens to interact more closely with different parts of society and to educate about issues concerning them (from Wikipedia). - Mod.TY]

At least 40 families have vacated their houses in Changaroth village after the deaths of 4 members of the affected family. And 50 families left their homes in 2 other villages, Koorachundu and Chakkittapara.

The government has also decided to book those who ostracize family members of the affected and the hospital staff.

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Communicated by:  
ProMED-mail Rapporteur Mary Marshall

[It is good to learn that no new cases of Nipah virus infection have emerged in this locality. Maintaining the 26 contacts under observation is prudent. - Mod.TY]

Maps of India can be accessed at:  
<<http://www.mapsofindia.com/maps/india/india-political-map.htm>> and  
<<http://healthmap.org/promed/p/308>>.]

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[2] Kerala new cases, Telangana and Karnataka NOT  
Date: Sun 27 May 2018  
Source: The News Minute [edited]  
<<https://www.thenewsminute.com/article/nipah-virus-claims-another-life-death-toll-rises-14-kerala-81989>>

The death toll from the Nipah virus outbreak that has put Kerala on high alert over the last 2 weeks has reached 14. The latest victim, a man from Palazhi, who was battling the virus in a private hospital in Kozhikode, passed away on Sunday afternoon [27 May 2018]. According to reports, it was confirmed that the victim had contracted Nipah [virus infection]. He had been in a critical condition for the past 4 days. On Saturday [26 May 2018], a 62-year-old woman under treatment at the Kozhikode Medical College hospital passed away.

According to reports, 2 more people with Nipah virus infection



admitted at the Kozhikode Medical College hospital are in critical condition.

Most cases have been reported in Kozhikode and Malappuram, and fresh instances of Nipah virus have come down, thanks to the efforts of the State Health Department.

Close to 200 patients in these 2 districts are being treated in hospitals, with 26 under observation and 3 who have tested positive under intensive treatment.

Meanwhile, 5 medical professionals are being sent to Delhi for an intensive course at the Safdarjung Hospital there to learn the treatment protocols to be followed in such cases.

Nipah virus is transmitted to humans through infected fruit bats, pigs, or other Nipah-infected persons.

With test results showing that a particular variety of bat found in and around Kozhikode and mostly at the worst-affected Perambara town near here is not carrying the virus, a special team from Pune is arriving to see how best they can take samples from other varieties of bats also found in this district.

In a related development, a police probe, initiated to find out the travel itinerary of the virus' 1st victim, found out that he never visited Malaysia but had been in the United Arab Emirates, from where he had returned in October last year [2017].

Several states have issued alerts. Despite the Union Health Ministry maintaining that the virus outbreak is a localised occurrence and there is no need to panic, fear runs high across the country.

Panic gripped Himachal Pradesh when several bats were found dead at Government Senior Secondary School in Barmapapri in Sirmaur district this week. However, tests at the National Institute of Virology in Pune ruled out that the bats were carrying Nipah virus.

Similarly, in Telangana, 2 persons, including one who visited Kerala recently, were admitted to hospitals on Friday [25 May 2018] with suspected Nipah virus infection. However, their samples later tested negative.

The Bihar government issued a Nipah virus alert on Saturday [26 May 2018], asking people to take precautions. An advisory has also been issued to people with dos and don'ts as preventive measures.

Madhya Pradesh issued its advisory on Friday [25 May 2018]. While saying there was no reason to worry as the virus is generally limited to a place, Health Services Director B.N. Chouhan advised against eating fruits that have fallen on the ground or appear to have animal teeth or claw marks.

The Rajasthan government also issued an advisory on Sat 26 May 2018 asking people not to travel to affected parts of Kerala and for officials to maintain caution.

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Communicated by:

ProMED-mail

<[promed@promedmail.org](mailto:promed@promedmail.org)>

[It is good to learn that the suspected cases of Nipah virus infection in Telangana state have been ruled negative after laboratory tests were done. A 24 May 2018 report indicated that there were 2 suspected Nipah virus cases in Karnataka state, a 20-year-old woman from Kasargod and a 75-year-old man from Mangaluru (see Nipah virus - India (04): (KL, KA) <http://promedmail.org/post/20180524.5815473>). However, a 26 May 2018 report of laboratory results stated that they both were negative for Nipah virus infection (<<https://www.deccanherald.com/state/there-no-nipah-virus-infection-gadag-district-671850.html>>).

It is also prudent for the other states mentioned above to have contingency plans in place before they have to deal with suspected cases. - Mod.TY]

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[3] Search for virus hosts, Kerala

Date: Sun 27 May 2018

Source: The Pioneer [edited]

<<http://www.dailypioneer.com/sunday-edition/sunday-pioneer/nation/tests-rule-out-bats-as-source-of-nipah-virus-in-kerala.html>>

The Nipah virus mystery deepened on Saturday [26 May 2018] as the samples collected from bats in Kerala's Kozhikode and Malappuram districts, where 13 people have died of the infection, have tested negative for the virus. A report submitted by a central medical team to the Union Health Ministry also ruled out pigs to be the primary source of the virus.

The medical team led by the National Centre for Disease Control (NCDC) is now looking into other possible reasons behind the outbreak following the report findings.

A total of 21 samples, including those from 7 species of bats, 2 species of pigs, one bovine, and one caprine, were sent to the National Institute of High Security Animal Diseases in Bhopal and the National Institute of Virology in Pune, said an official from the Ministry. "These included the samples of the bats which were found in the well in a house in Kerala's Perambra from where the initial death was reported. They have tested negative for the Nipah virus," he said.

Samples from humans suspected of contracting Nipah virus have tested negative, "which means there are only 15 confirmed cases, which include 12 deaths, and 3 persons are undergoing treatment," the official added. Similarly, the samples from bats found dead in Himachal Pradesh, which were sent to the Pune Institute, have been found negative, and the 2 samples of suspected cases from Hyderabad were also negative.

The Health Ministry has urged people not to panic, asserting that the



outbreak is "localised" to Kerala. It has issued advisories to the general public and healthcare providers to adopt preventive measures.

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[The tests of 7 species of bats, all apparently collected from a well in the area where the 1st cases occurred, do not rule out bats as hosts of Nipah virus.

The species of the bats tested is not indicated, nor is the number of individuals per species among the 22 samples taken. Giant fruit bats (in the genus *Pteropus*), the recognized Nipah virus hosts in Malaysia and Bangladesh, roost in trees and not in wells. The bats in the photograph of the investigators placing them in a jar appear to be much smaller than giant fruit bats, which would not fit into a jar that size. Interestingly, a 28 May 2018 report stated that animal husbandry officer A. Mohandas indicated that the department was now collecting samples of fruit bats (*Pteropus*?) from Perambra, the suspected epicenter of the infection and nearby areas

(<<https://www.reuters.com/article/us-india-virus/india-steps-up-hunt-for-origin-of-mysterious-brain-damaging-virus-idUSKCN1I1A8>>).

The results of the tests on fruit bats are awaited with interest. -  
Mod.TY]

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[4] Goa ex Kerala suspected

Date: Mon 28 May 2018

Source: The Hindu [edited]

<<http://www.thehindu.com/news/national/other-states/goa-gets-first-suspected-case-of-nipah-virus/article24011886.ece>>

The state-run Goa Medical College (GMC) hospital near Panaji on Monday [28 May 2018] quarantined a native of Kerala who travelled to Goa by train after he developed symptoms similar to those affected by the deadly Nipah virus.

Health Minister Vishwajeet Rane told press persons that it was still unclear whether the patient was suffering from Nipah disease and that they would get clarity once test results are verified at the National Institute of Virology in Pune.

"It is not clear yet whether it is a Nipah case. We will have to wait for test results from Pune. The person admitted himself to the hospital after he felt he had some symptoms similar to those affected by Nipah, and he has been kept in the isolation ward at the GMC," said Mr. Rane.

Mr. Rane asserted that all measures were being taken to ensure that the patient is quarantined until the test results are received by his ministry.

Nipah virus, which has led to some deaths in Kerala, is transmitted

through direct contact with infected bats, pigs, or from other Nipah virus-infected people.

[Byline: Prakash Kamat]

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Communicated by:  
ProMED-mail Rapporteur Mary Marshall

[Although the probability of this being a case of Nipah virus infection is not high, the health officials and hospital in Goa are wise to handle it as a real possibility until the laboratory results are in. - Mod.TY

HealthMap/ProMED-mail map:  
Kerala State, India: <<http://healthmap.org/promed/p/308>>]

[See Also:  
Nipah virus - India (06): (KL,KA)  
<http://promedmail.org/post/20180526.5819777>  
Nipah virus - India (05): (KL,TG)  
<http://promedmail.org/post/20180525.5817917>  
Nipah virus - India (04): (KL, KA)  
<http://promedmail.org/post/20180524.5815473>  
Nipah virus - India (03): (KL) conf.  
<http://promedmail.org/post/20180522.5812214>  
Nipah virus - India (02): (KL) conf  
<http://promedmail.org/post/20180521.5809003>  
Nipah virus - India: (KL) susp  
<http://promedmail.org/post/20180521.5807513>  
2007

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Nipah virus, fatal - India (West Bengal) (02)  
<http://promedmail.org/post/20070511.1514>  
Nipah virus, fatal - India (West Bengal)  
<http://promedmail.org/post/20070508.1484>  
Undiagnosed deaths - Bangladesh, India (04)  
<http://promedmail.org/post/20070504.1451>  
Undiagnosed deaths - Bangladesh, India (03)  
<http://promedmail.org/post/20070501.1413>  
Undiagnosed deaths - Bangladesh, India (02)  
<http://promedmail.org/post/20070430.1401>  
Undiagnosed deaths - India (West Bengal): RFI  
<http://promedmail.org/post/20070426.1365>  
Undiagnosed deaths, encephalitis - Bangladesh (Kushtia) (02): Nipah,  
RFI  
<http://promedmail.org/post/20070423.1330>  
Undiagnosed deaths - Bangladesh, India: RFI  
<http://promedmail.org/post/20070420.1300>  
2003

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Nipah-like virus - India (North Bengal): 2001  
<http://promedmail.org/post/20030106.0050>  
2001

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Unexplained deaths - India (North Bengal) (11)

<http://promedmail.org/post/20010330.0643>

Unexplained deaths - India (North Bengal): RFI

<http://promedmail.org/post/20010220.0328>]

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